

**REMARKS**

Claims 1 and 3-18 are now pending in the application. Claims 1, 3, 4, 7, 11 and 15 have been amended herein. Claim 2 has been canceled. Favorable reconsideration of the application, as amended, is respectfully requested.

***I. CLAIM AMENDMENTS***

Applicants have amended the independent claims in a manner similar to the now allowed claims in the corresponding European and Chinese applications, in which the same primary reference was applied.

Claim 1 has been amended to incorporate the features of claim 2, now canceled. In addition, claim 1 has been amended to recite the feature in which “the re-encoder calculates the psychoacoustic model information based on the quantized information”.

Claims 3 and 4 have been amended to provide proper dependency.

Claims 7, 11 and 15 have been amended similar to claim 1 in that each of the independent claims now recites the third step of calculating the psychoacoustic model information “based on the quantized information” and indicating frequency bands of the first audio signal masked by auditory characteristics.

Support for such amendments is found, for example, in the present application at page 17, lines 14-26; and page 24, lines 9-20.

***II. REJECTION OF CLAIMS 1-4, 7-9, 11-13 AND 15-17 UNDER 35 USC §102(b)***

Claims 1-4, 7-9, 11-13 and 15-17 stand rejected under 35 USC §102(b) based on *Nakajima et al.* Applicants respectfully request withdrawal of the rejection for at least the following reasons.

As noted above, applicants have amended independent claims 1, 7, 11 and 15 to recite that the first audio stream information is obtained by performing a time-frequency conversion on the first audio signal into a frequency domain signal to quantize the frequency domain signal. Specifically, claims 1, 7, 11 and 15 now recite how the re-encoder calculates the psychoacoustic model information. More specifically, claims 1, 7, 11 and 15 recite that the re-encoder calculates the psychoacoustic model information based on the quantized information. For reasons explained more fully below, *Nakajima et al.* does not teach or suggest a re-encoder that calculates the psychoacoustic model information based on the quantized information as recited in claims 1, 7, 11 and 15.

*Nakajima et al.* describes MPEG audio bit rate scaling on coded data domains. Specifically, *Nakajima et al.* describes that after subband analysis, the psychoacoustic model calculates the masking threshold and signal-to-mask ratio for each subband. *Nakajima et al.* also teaches a re-quantization method reflecting the psychoacoustic model for higher conversion efficiency. (See, e.g., Section 2.3 of *Nakajima et al.*).

However, *Nakajima et al.* is silent as to how the psychoacoustic model is actually calculated. Specifically, *Nakajima et al.* does not teach or suggest that the psychoacoustic model is calculated based on the quantized information as recited in claims 1, 7, 11 and 15. Therefore, *Nakajima et al.* does not teach each and every feature of the present invention as recited in claims 1, 7, 11 and 15.

Applicants note that the Examiner, in rejecting claim 7, refers to *Nakajima et al.* at page 3670, right column, lines 10-24, as teaching “calculating psychoacoustic information indicating frequency bands of the first audio signal masked by auditory characteristics.” However, *Nakajima et al.* at page 3670, right column, lines 10-24 is not describing how the psychoacoustic model is calculated as is relevant in conjunction with amended claims 1, 7, 11 and 15. Rather, *Nakajima et al.* at lines 10-34 refers to re-quantizing subband samples toward equal increase of NMR for each subband, so as to achieve bit rate scaling reflecting the psychoacoustic model.

In other words, *Nakajima et al.* describes calculations to allow the bit rate scaling to reflect the psychoacoustic model. *Nakajima et al.* does not teach or suggest how the

psychoacoustic model itself is calculated. Specifically, *Nakajima et al.* does not teach or suggest that the psychoacoustic model is calculated based on the quantized information as recited in claims 1, 7, 11 and 15.

For at least the above reasons, applicants respectfully submit that claims 1, 7, 11, 15, and the rejected claims dependent therefrom, are patentably distinct over the teachings of *Nakajima et al.* Applicants respectfully request withdrawal of the rejection.

### **III. REJECTION OF CLAIMS 5, 6, 8, 10, 14 AND 18 UNDER 35 USC §103(a)**

Claims 5, 6, 8, 10, 14 and 18 stand rejected under 35 USC §103(a) based on *Nakajima et al.* in view of *Li et al.* Applicants respectfully request withdrawal of this rejection for at least the following reasons.

Claims 5, 6, 8, 10, 14 and 18 each depend from one of the above-discussed independent claims, either directly or indirectly, and can be distinguished over the teachings of *Nakajima et al.* for at least the same reasons discussed above. Moreover, *Li et al.* does not make up for the deficiencies in *Nakajima et al.*

As a result, applicants respectfully request withdrawal of the rejection of claims 5, 6, 8, 10, 14 and 18 as well.

### **IV. CONCLUSION**

Accordingly, all claims 1 and 3-18 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

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Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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